

Wildland Fire Management

Program Overview

May 2020

	
<p>City of Flagstaff 211 W. Aspen Flagstaff AZ 86001 928-213-2509 www.flagstaff.az.gov/wildlandfire</p>	<p>Summit Fire & Medical 8905 N Koch Field Rd Flagstaff, AZ 8604 928- 526-9537 https://summitfiredepartment.org/</p>

The Flagstaff Fire Dept (FFD) and Summit Fire & Medical Dept (SFMD) Wildland Fire Management Program operates as a single joint entity. Residents in either jurisdiction may contact either Dept for any related Wildland Fire Management needs. This includes, but is not limited to:

- *Firewise Home & Property Assessments,*
- *Hazard Tree identification and Evaluation,*
- *Identification and Thinning/Removal of Hazardous Fuels, and*
- *Prescribed fire assistance.*

Together, we are stronger and more efficient. We look forward to serving you as we work to Restore our forests, Protect our communities, and Provide safe, effective wildfire response

Our Commitment
Cooperation & Collaboration
Innovative Action
Adaptive Management

STAFF

Forest Health Branch

Neil Chapman
Forest Health Supervisor
(928) 213-2512
nchapman@flagstaffaz.gov

Jerolyn Byrne
Firewise Specialist
(928) 213-2510
jbyrne@flagstaffaz.gov

Fire Management Branch

Paul Oltrogge
Wildland Fire Manager
(928) 213-2509
poltrgge@flagstaffaz.gov

Skyler Lofgren
Crew Supervisor
(928) 213-2596
slofgren@flagstaffaz.gov

Mike Walker
Crew Squad Boss
(928) 213-2596
mwalker@sfmd.org

Background: A sustainable, healthy forest is the very backdrop of our area, and the reason many call the Flagstaff area home. Our Wildland Fire Management (WFM) program is a unique joint-effort for both Municipal and District government to ensure the future of our greater community. It has been dubbed “a national model” for others who face similar challenges.

Destructive wildfire is the greatest natural threat facing us and it has the largest potential of virtually any hazard we face to inflict long-lasting damage to the community. It also is a recurring, annual threat that is identifiable, predictable, and solvable.

Our FOCUS:

- **Educating** citizens and stakeholders to understand the issues and to make wise choices;
- **Engineering** our built environment to withstand damage from destructive fire events;
- **Enforcing** applicable codes, Fire Adapted Community standards, and Firewise practices; and
- **Environmental** actions that restore and maintain natural processes to reduce the threat of, and impacts from, wildfire.

Following a damaging wildfire, post-fire impacts, notably uncontrolled flooding, is a real possibility. These events often continue for years after the fire, and are often more destructive than the fire. Once the ecosystem begins to unravel, it is very difficult to protect those impacted and even harder to restore.

To protect our community and promote healthy, sustainable forests, our WFM program, first initiated in 1997, acts throughout the Flagstaff Wildland/Urban Interface (WUI), an area that encompasses several jurisdictions and ownerships and can extend for miles outside our jurisdictions.

Goals: Using the *National Cohesive Strategy* as a guide, we have three over-arching goals

- 1. Our forests are resilient** to disturbances in accordance with management objectives as identified in the City's Forest Stewardship Plan, Community Wildfire Protection Plan (CWPP), site-specific Vegetation Management plans, Rx-Fire plans, the City Land Development Code, the Flagstaff Watershed Protection Project, and other related planning documents.
Outcome: Risk to resiliency of our forests is diminished; sustainability is enhanced
- 2. Our community can withstand a wildland fire without loss of life and property** because we have assessed our level of risk via the CWPP and other assessment methodologies, and practice a shared responsibility for mitigating both the threat and the consequence via application of the Flagstaff Wildland Urban Interface Code and other professional resource management standards, engagement of stakeholders, collaboration with partners, use of volunteers, and accountable grant management.
Outcome: Risk to Flagstaff is diminished; community well-being is enhanced
- 3. We make and implement safe, effective, efficient risk-based wildland fire decisions.** Risk Management is an on-going process in all we do.
Outcome: Risk to the public and emergency personnel is diminished; response and recovery is efficient and effective.

To achieve our goals, we operate in five core-areas, each inter-related and necessary for success:




These five areas encompass the following:

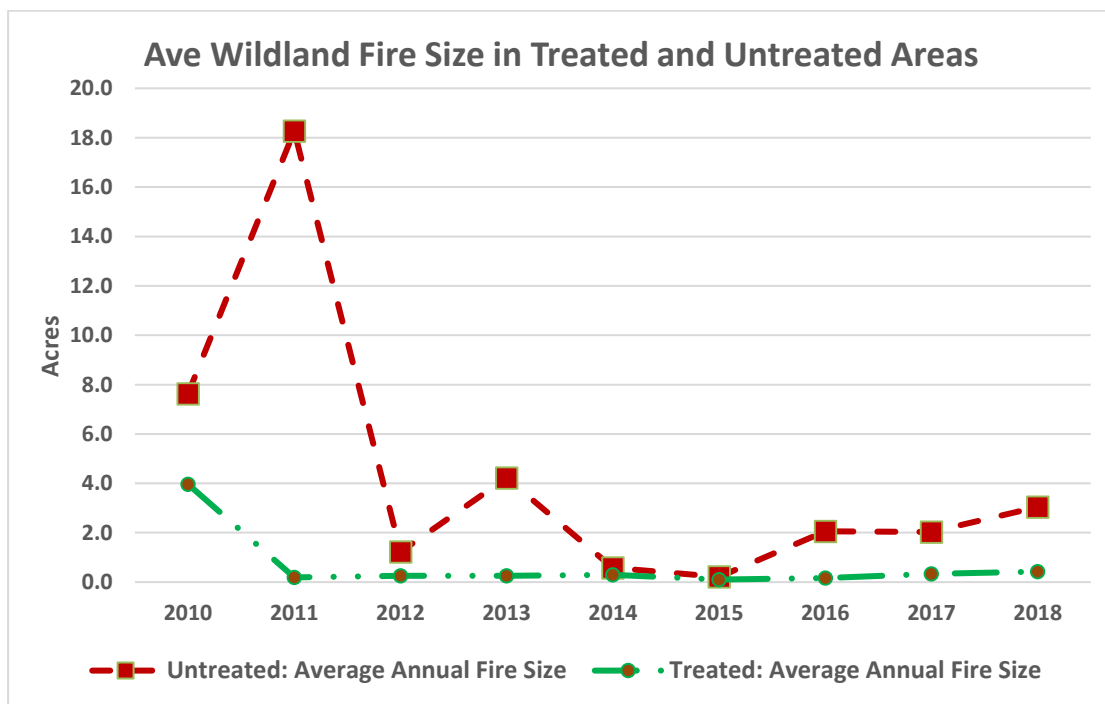
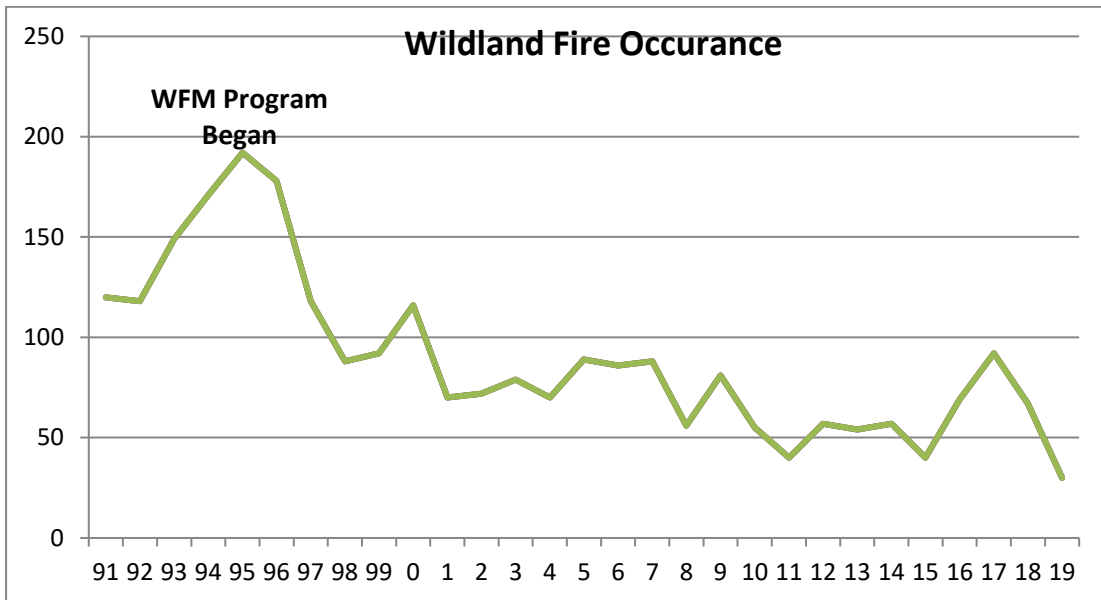
Prevention	Actions to protect lives and property through avoidance and intervention that stop wildfires from occurring, or limiting damage that would otherwise occur (Ex: WUI Code enforcement, Firewise/ and/or Fire Adapted Communities standards)
Preparedness	A cycle of planning, organizing, training, equipping, exercising, evaluating, and taking corrective action in an effort to reduce wildfire risk to the community (Ex: Training, certification, fire preparedness planning, Restrictions & Closure Plan)
Hazard Mitigation	Activities that directly affect fire behavior, thus reducing the loss of life and property from wildfire while creating a safer community (Ex: thinning, prescribed fire, debris disposal).
Response	Activities that address the short-term, direct impacts of a wildfire incident, including immediate actions to save lives, protect property, and meet basic human needs (Ex: Emergency Operations Center leadership, fire response, Interagency cooperation)
Recovery	Actions taken to restore services, recover costs, and provide basic human needs following a wildfire, to include documenting Lessons Learned, and identifying items to minimize impact of future fires (Ex: After Action Reviews, Cost reimbursements)

Accomplishments:

Since 1999, we have completed:	
<ul style="list-style-type: none"> + Plans <ul style="list-style-type: none"> • <i>General Forest Stewardship, Vegetation Management, Prescribed Burns</i> • <i>Flagstaff Watershed Protection Project</i> 	18,653 acres
+ Marked	8,285 acres
+ Thinned – <i>hand and/or mechanical</i>	16,209 acres
+ Burned – <i>pile (Debris-disposal) or broadcast (ecosystem health)</i>	14,140 acres
+ Chipped	1,835 acres
+ Hazard Trees (<i>removed</i>)	2,692 trees
+ Designated Firewise neighborhoods (national)	13
Since 2001, Volunteers have	
<ul style="list-style-type: none"> + Contributed 49,248 hours of service (primarily in Outreach and Hazard Mitigation efforts) . . . , + Valued at \$738,720 	

	<p>The <i>Flagstaff Watershed Protection Project (FWPP)</i> is truly the “first-of-its kind”. Passed in Nov 2012 with 74% approval, the \$10M bond is designed to treat city, state, and federal lands, much of it located outside the City boundaries, to prevent catastrophic wildfire and post-fire flooding. It is the only known voter-approved bond funded forest-treatment project in the country. Since Jan 2013, much has been accomplished: much remains to be done. For more info, visit:</p> <p style="text-align: center;">www.flagstaffwatershedprotection.org</p>
---	---

Two other key metrics of success are to look at trends for both # of wildfires burning within the City and the average size of those fires when they occur in untreated areas vs treated areas:



Our efforts have demonstrated success:

- Woody Fire – 2005: Evacuated 1,000+ residents, closed W. Hwy 66 & westbound I-40. All evacuees allowed home and freeway re-opened within four hours. Due to treatments in-place, City not responsible for non-city related suppression costs (est \$250K).
- Hardy Fire – 2010: Evacuated 1,000+ residents, closed area businesses and E. butler Ave. All evacuees allowed home, and businesses and E. Butler Ave re-opened that evening. Took a week to fully control, but due to treatments in-place, City not responsible for non-city related suppression costs (\$750K).

Key Program Highlights include:

1996	<i>First demonstration project</i>
1997	<i>Staff hired</i>
1999	<i>Be Prepared Public Education campaign initiated</i>
2001	<i>Volunteer Program launched</i>
2004	<i>Simple Steps to Protect Your Property from Wildfire CD developed Community Wildfire Protection Plan (CWPP) completed</i>
2005	<i>Needle project with Charter school and Juvenile Court system begun Movie promotions at local theaters released City-wide Neighborhood Risk Assessment completed Greater Flagstaff Area Community Wildfire Protection Plan (CWPP) adopted</i>
2006	<i>First Firewise Neighborhood designated</i>
2007	<i>Recipient – National FireWise Leadership Award</i>
2008	<i>Wildland Urban Interface Fire Code adopted City Well-field project</i>
2009	<i>Vegetation Permit & Fee policy begun</i>
2010	<i>City Airport project Slash recovery/utilization effort with City Public Works initiated</i>
2011	<i>Social Media program developed and launched Auxiliary Staffing program initiated</i>
2012	<i>\$10M Flagstaff Watershed Protection Project (FWPP) bond passed (74% approval)</i>
2013	<i>FWPP: kick-off, with emphasis on public outreach and agreement development</i>
2014	<i>FWPP: Draft Environmental Impact Statement (DEIS) and Cost Avoidance Study Hazard Tree removal program initiated</i>
2015	<i>Recipient - First National Wildfire Innovation Mitigation Award People’s Choice Award – Innovation for Disaster Preparation</i>
2016	<i>Initiated new partnership with American Conversation Experience (ACE) Pioneered use of Tablet Technology in harvesting operations Initiated partnership relationship with Santa Fe (NM) Fire Dept’s wildland fire program</i>
2017	<i>FWPP 5-Year Anniversary Established cross-state Type 2 IA (Initial Attack) fire crew with Santa Fe (NM) Fire Department</i>
2018	<i>Initiated partnership with Team Rubicon: 1st deployment</i>
2019	<i>Integration of effort between City of Flagstaff and Summit Fire & Medical District</i>
SINCE 1999	<i>In addition to on-going City funding and reimbursable fire/emergency incidents, we have benefitted from a number of grants, contracts, and donations, totaling in excess of \$4,600,000</i>

Partners: Our success is largely due to the incredible partnerships we have forged over the years. These include:

- Over 1,000 individual property owners, and counting
- Private business
- Flagstaff Unified School District (FUSD)
- Coconino County
- Ponderosa Fire Advisory Council (PFAC)
- Greater Flagstaff Forests Partnership (GFFP)

- Northern AZ University:
 - School of Forestry
 - Ecological Restoration Institute
 - Rural Policy Institute
 - School of Communication
- State of AZ:
 - State Dept of Forestry & Fire Management (DFFM)
 - Dept of Corrections (ADOC)
 - Division of Emergency Management (ADEM): Camp Navajo Army Depot
 - Game & Fish Dept (F&G)
- American Conservation Experience (ACE)
- AZ Conservation Corps (AZCC)
- Willow Bend Environmental Education Center
- Navajo Nation
- Friends of the Rio
- Flagstaff Arboretum
- Team Rubicon
- Museum of Northern AZ
- Four Forests Restoration Initiative (4FRI)
- Federal:
 - US Forest Service (USFS)
 - US Naval Observatory (NOFS)
 - Grand Canyon National Park (GCNP)
 - US Fish and Wildlife Service (USF&WS)

We have:

- ❖ Seen a community and area-wide paradigm shift regarding our forests and needed actions
- ❖ Assisted many other at-risk communities – locally, nationally, and internationally
- ❖ Been recognized as a “national model”
- ❖ Hosted: *Regional Fuel Management/Forest Stewardship symposiums*
National Academy of Public Administration wildfire workshop
- ❖ Provided testimony to: *US House of Representatives* regarding National Fire Plan
AZ State Legislature regarding pending forest legislation
- ❖ Presented at: *AZ Forest Economic & Resiliency workshop*
Western Communities Water Sustainability conference
Firewise Backyards & Beyond national conference
American Planning Association national conference
American Waterworks Association national conference
National Wildfire Leadership Council
ASU School of Law – Will AZ Learn or Burn conference
International Association of Fire Chiefs national conference
National Fire Protection Association national conference
- ❖ Published: *Flagstaff Interface Treatment Prescription: Success in the Wildland/Urban Interface* (Fire Management Today)
Wildland/Urban Interface: What’s Really At Risk (Fire Management Today)
Community Protection & Well-Being (American Planning Association)
Testing for Deck Material Flammability (Fire Management Today)
Interface Code Adoption (Fire Chief Magazine)
The Flagstaff Experience (AZ State Law Journal)

- ❖ Conducted ad-hoc testing of various composite deck materials
- ❖ Helped found the Greater Flagstaff Forests Partnership (GFFP) - www.gffp.org
- ❖ Led and/or participated in: *State Forest Health Council*
Four Forests Restoration Initiative
NAU Centennial Forest
AZ Firewise Communities Committee
Ponderosa Fire Advisory Council
AZ Prescribed Fire Council
- ❖ Hosted research and monitoring projects:
Insect and Bird Populations in a Treated Area – FUSD
The Effects of Pile Burning on Forest Soil Ecology – NAU-SoF
The Effects of Burning or Chipping on Herbaceous Plants – Flagstaff Arboretum
Vegetative Response on Treated Sites – NAU-ERI
Recovery of Disturbed Sites Using Myco-Filtration – Practical Mycology
Distribution of Seeds by Rodents in Burned Areas – NAU-ERI
Squirrel Response to Thinning – AZ G&F
Bat Use of Harvested Areas – NAU-ERI
Wood Properties of Harvested Material – NAU-ERI
Slash Drying and Insect Populations – NAU-ERI
- ❖ Developed and manage the FWPP Monitoring Plan, to include
Mexican Spotted Owl Habitat
Steep Slope Ground-Based Equipment Operation
Lake Mary & Dry Lake Hills monitoring gauge stations

Experience, Studies, and Reports demonstrate the impact of destructive fires, nationally, regionally, and locally:

- 2003 –
 - *Bureau of Land Management* – Flagstaff rated #1 threatened community in AZ;
 - *City Report* – Projected \$60M 1st year tourism-generated economic loss to Flagstaff economy.
- 2005 – *City Multi-Hazard Mitigation Plan*: \$897M “collective community-wide wildfire exposure”.
- 2010 –
 - *Wildland Fires in Municipal Jurisdictions*: Annual repeating pattern affecting monthly workload and service delivery, and 8% chance of injury/death to citizens/responders per incident;
 - *Flagstaff*: \$850K one-week suppression cost of Hardy Fire.
- 2013 –
 - *Schultz Fire Full-Cost Accounting Report*, NAU: \$10M in suppression costs + \$135M in recovery costs;
 - *FWPP Cost Avoidance Study*, NAU: \$550M-\$1.2B projected community impact.
- 2014 – *Sedona Chamber of Commerce*: \$100M loss in first three months following Slide Fire in Oak Creek Canyon.
- 2015 –
 - *Core Logic*: 8,000 homes at Very High risk in AZ, with 4,000 of those in Flagstaff, and Flagstaff is in top 10 of all statistical areas identified in 13 western states;
 - *Verisk Insurance Solutions*: 27% of all Coconino County homes at High-Extreme risk.

The Flagstaff community has shown remarkable understanding and support for the WFM program over the past 20 years:

- 2001 – *Community Survey (NAU Social Research Lab)*
 - 87% - support for forest treatments;
 - 91% - forest treatments have positive impact on area forests;
 - 81% - forest treatments effective in reducing fire risk.
- 2005 – *Community Wildfire Protection Plan* adopted by Council without opposition or negative comment.
- 2006 – *Community Survey (NAU Social Research Lab)*
 - 91% - forest treatments have positive impact on area forests;
 - 81% - forest treatments effective in reducing fire risk.
- 2008 – *Flagstaff Wildland Urban Interface Code* adopted by Council without opposition or negative comment.
- 2009 - *City of Flagstaff Community Survey*
 - 92% - support use of prescribed fire to maintain healthy forests;
 - 90% - support requirements that property owners meet requirements to protect community.
- 2010 – *Southern Fire Exchange*: Nationally, Flagstaff is an “upper-tier” community in terms of acceptance of/support for prevention and preparedness efforts.
- 2012 –
 - *Willingness to Pay community Survey (NAU Ecological Restoration Institute)*
 - ✓ 4.52 (out of 5) – wildfire prevention as a high priority;
 - ✓ 3.97 (out of 5) – importance of watershed health;
 - ✓ \$4.76/month – average \$ to fund forest treatments;
 - *Q405 (FWPP)*
 - ✓ Approved by 74% of Flagstaff voters,
 - ✓ Exit poll surveys revealed those who voted YES believed their individual tax bill would increase by \$128/year.
- 2013 – *City of Flagstaff Community Survey*
 - Quality of overall natural environment received highest rating, higher than given to peer communities across the country;
 - 92% - support use of prescribed fire to maintain healthy forests;
 - 90% - support requirements that property owners meet requirements to protect community;
 - Rating of Fire Dept was higher than national benchmark.
- 2019 – *Flagstaff Focus Groups* - Trust for Public Lands and National Forest Foundation
 - \$50/year – median willingness to pay to support forest health and wildland fire management efforts (two separate groups).
- 2020 – *Post Museum fire community survey (NAU Ecological Restoration Institute)*
 - 80% of respondents support FWPP and similar type forest treatments actions

Our Success - built on **Council and Public support, Leadership and Action:**

- Recognition of issue and solutions;
- Development of community consciousness & partnerships;
- Innovative approaches and a focused goal; and
- Timely, professional, sensitive practices